

WHAT IS CLAIMED IS:

1. An interactive system comprising:
  - a voice input section inputting voice uttered by a user;
  - a voice recognition processing section recognizing the voice inputted by the voice input section, and converting the recognized voice into an input symbol string;
    - a conversation pattern processing section inputting said input symbol string from the voice recognition processing section, and outputting an output symbol string corresponding to said input symbol string based on a conversation pattern described in advance;
    - a voice synthesis processing section converting said output symbol string from the conversation pattern processing section into voice;
    - a voice output section outputting and uttering the voice from the voice synthesis processing section; and
    - a conversation characteristic control section grasping conversation characteristics of said user based on said input symbol string from said conversation pattern processing section, and changing said output symbol string in accordance with the grasped conversation characteristics.
2. An interactive system according to claim 1, wherein said conversation characteristic control section optimizes a conversation topic, a conversation pattern, uttered words, a conversation response interval, utterance frequency and timing during the utterance based on words and a conversation pattern used by the user with high frequency, a specific topic, times of conversation responses and utterance time and the number of words uttered by the user.
3. An interactive system comprising:
  - a voice input section inputting voice uttered by a user;
  - a voice recognition processing section recognizing the voice inputted by the voice input section, and converting the recognized voice into an input symbol string;
    - a conversation pattern processing section inputting said input symbol string from the voice recognition processing section, and outputting an output symbol string corresponding to said input symbol string based on a conversation pattern described in advance;
  - a voice synthesis processing section converting said output symbol

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- string from the conversation pattern processing section into voice;
- a voice output section outputting and uttering the voice from the voice synthesis processing section;
- a storage section storing synonyms and relevant words synonymous with and relevant to words uttered by said user; and
- 5      an association function section extracting the synonyms and relevant words synonymous with and relevant to words uttered by said user from said storage section based on said input symbol string from said conversation pattern processing section, and outputting said extracted synonyms and relevant words to said conversation pattern processing section.
4.      An interactive system comprising:
- a voice input section inputting voice uttered by a user;
- a first voice recognition processing section recognizing the voice inputted by the voice input section, and converting the recognized voice into a first input symbol string;
- a conversation pattern processing section inputting said first input symbol string from the first voice recognition processing section, and outputting an output symbol string corresponding to said first input symbol string based on a conversation pattern described in advance;
- a voice synthesis processing section converting said output symbol string from the conversation pattern processing section into voice;
- a voice output section outputting and uttering the voice from the voice synthesis processing section;
- 25      a second recognition processing section recognizing broadcast voice from a broadcast station, and converting the recognized broadcast voice into second input symbol strings; and
- an event data storage section storing said second input symbol strings as event data.
- 30      5.      An interactive system according to claim 4, comprising
- an event data processing section extracting only a symbol string desired by the user among said second input symbol strings converted by said second voice recognition section, and storing the extracted symbol string in said event data storage section.
- 35      6.      An interactive system according to claim 4, comprising

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- a conversation characteristic control section grasping conversation characteristics of said user based on said input symbol string from said conversation pattern processing section, and changing said output symbol string in accordance with the grasped conversation characteristics.
- 5    7. An interactive system according to claim 4, comprising:  
      a storage section storing synonyms and relevant words synonymous with and relevant to words uttered by said user; and  
      an association function section extracting the synonyms and relevant words synonymous with and relevant to words uttered by said user from said storage section based on said input symbol string from said conversation pattern processing section, and outputting said extracted synonyms and relevant words to said conversation pattern processing section.
- 10    8. A two-way interactive system comprising a plurality of interactive systems each conducting an interactive processing for interaction with a user, the respective interactive systems communicating with one another, each of said interactive systems comprising:  
      a voice input section inputting voice uttered by a user;  
      a voice recognition processing section recognizing the voice inputted by the voice input section, and converting the recognized voice into an input symbol string;  
      a conversation pattern processing section inputting said input symbol string from the voice recognition processing section, and outputting an output symbol string corresponding to said input symbol string based on a conversation pattern described in advance;
- 15    9. A voice synthesis processing section converting said output symbol string from the conversation pattern processing section into voice;  
      a voice output section outputting and uttering the voice from the voice synthesis processing section;
- 20    10. An event data transmission and reception section transmitting said input symbol string to the other interactive system as event data, and receiving event data consisting of the symbol string from said other interactive system; and  
      an event data storage section storing the event data received by the event data transmission and reception section from said other interactive

system.

9. A two-way interactive system according to claim 8, comprising:  
an input section inputting a privacy protection command of said  
user; and

5 a privacy protecting function section transmitting said event data  
acquired by utterance of said user to said other interactive system if said  
privacy protection command is not inputted from the input section, and not  
transmitting said event data acquired by the utterance of said user to said  
other interactive system if said privacy protection command is inputted  
from the input section.

10 10. A two-way interactive system according to claim 8, comprising:  
a conversation characteristic control section grasping conversation  
characteristics of said user based on said input symbol string from said  
conversation pattern processing section, and changing said output symbol  
string in accordance with the grasped conversation characteristics.

11. A two-way interactive system according to claim 8, comprising:  
a storage section storing synonyms and relevant words synonymous  
with and relevant to words uttered by said user; and  
an association function section extracting the synonyms and  
relevant words synonymous with and relevant to words uttered by said user  
from said storage section based on said input symbol string from said  
conversation pattern processing section, and outputting said extracted  
synonyms and relevant words to said conversation pattern processing  
section.

25 12. A two-way interactive system according to claim 8, wherein  
a second recognition processing section recognizing broadcast  
voice from a broadcast station, and converting the recognized broadcast  
voice into second input symbol strings; and

30 an event data storage section storing said second input symbol  
strings as event data.

13. An interactive method comprising:  
a voice recognition processing step of recognizing voice uttered by  
a user, and of converting the recognized voice into an input symbol string;  
a conversation pattern processing step of inputting said input  
symbol string, and of outputting an output symbol string corresponding to

- 10 said input symbol string based on a conversation pattern described in advance;
- 15 a voice synthesis processing step of converting said output symbol string into voice;
- 20 5 a voice output step of outputting and uttering the voice obtained in the voice synthesis processing step; and
- 25 a conversation characteristic control step of grasping conversation characteristics of said user based on said input symbol string, and of changing said output symbol string in accordance with the grasped conversation characteristics.
- 30 14. An interactive method according to claim 13, wherein  
said conversation characteristic control step optimizes a conversation topic, a conversation pattern, uttered words, a conversation response interval, utterance frequency and timing during the utterance based on words and a conversation pattern used by the user with high frequency, a specific topic, times of conversation responses and utterance time and the number of words uttered by the user.
- 35 15. An interactive method comprising:  
a voice recognition processing step of recognizing voice uttered by a user, and of converting the recognized voice into an input symbol string;  
a conversation pattern processing step of inputting said input symbol string, and of outputting an output symbol string corresponding to said input symbol string based on a conversation pattern described in advance in a conversation pattern processing section;
- 40 25 a voice synthesis processing step of converting said output symbol string into voice;  
a voice output step of outputting and uttering the voice obtained the voice synthesis processing step;
- 45 30 a storage step of storing synonyms and relevant words synonymous with and relevant to words uttered by said user; and
- 50 35 an association function step of extracting the synonyms and relevant words synonymous with and relevant to words uttered by said user from said storage section based on said input symbol string, and of outputting said extracted synonyms and relevant words to said conversation pattern processing section.

16. An interactive method comprising:  
a first voice recognition processing step of recognizing voice uttered by a user, and of converting the recognized voice into a first input symbol string;
- 5 a conversation pattern processing step of inputting said first input symbol string, and of outputting an output symbol string corresponding to said first input symbol string based on a conversation pattern described in advance;
- 10 a voice synthesis processing step of converting said output symbol string into voice;
- 15 a voice output section outputting and uttering the voice obtained in the voice synthesis processing step;
- 20 a second recognition processing step of recognizing broadcast voice from a broadcast station, and converting the recognized broadcast voice into second input symbol strings; and
- 25 an event data storage step of storing said second input symbol strings as event data.
17. An interactive method according to claim 16, comprising  
an event data processing step of extracting only a symbol string desired by the user among said second input symbol strings converted in said second voice recognition step, and of storing the extracted symbol string in said event data storage section.
18. An interactive method according to claim 16, comprising  
a conversation characteristic control step of grasping conversation characteristics of said user based on said input symbol string, and of changing said output symbol string in accordance with the grasped conversation characteristics.
19. An interactive method according to claim 16, comprising:  
a storage step of storing synonyms and relevant words synonymous with and relevant to words uttered by said user; and  
30 an association function step of extracting the synonyms and relevant words synonymous with and relevant to words uttered by said user from said storage section based on said input symbol string, and of outputting said extracted synonyms and relevant words to said conversation pattern processing section.

20. A two-way interactive method of allowing a plurality of interactive systems each conducting an interactive processing for interaction with a user to communicate with one another, the method comprising:
- 5        a voice recognition processing step of recognizing the voice uttered by a user, and of converting the recognized voice into an input symbol string;
- 10      a conversation pattern processing step of inputting said input symbol string, and of outputting an output symbol string corresponding to said input symbol string based on a conversation pattern described in advance;
- 15      a voice synthesis processing step of converting said output symbol string into voice;
- 20      a voice output section outputting and uttering the voice obtained in the voice synthesis processing step;
- 25      an event data transmission and reception step of transmitting said input symbol string to the other interactive system as event data, and of receiving event data consisting of the symbol string from said other interactive system; and
- 30      an event data storage step of storing the event data received from said other interactive system.
35. 21. A two-way interactive method according to claim 20, comprising:
- an input step of inputting a privacy protection command of said user; and
- a privacy protecting function step of transmitting said event data acquired by utterance of said user to said other interactive system if said privacy protection command is not inputted from the input section, and not transmitting said event data acquired by the utterance of said user to said other interactive system if said privacy protection command is inputted from the input section.
30. 22. A two-way interactive method according to claim 20, comprising:
- a conversation characteristic control step of grasping conversation characteristics of said user based on said input symbol string, and of changing said output symbol string in accordance with the grasped conversation characteristics.
35. 23. A two-way interactive method according to claim 20, comprising:

a storage step of storing synonyms and relevant words synonymous with and relevant to words uttered by said user; and

an association function step of extracting the synonyms and relevant words synonymous with and relevant to words uttered by said user  
5 from said storage section based on said input symbol string, and of outputting said extracted synonyms and relevant words to said conversation pattern processing section.

24. A two-way interactive method according to claim 20, comprising:

10 a second recognition processing step of recognizing broadcast voice from a broadcast station, and of converting the recognized broadcast voice into second input symbol strings; and

an event data storage step of storing said second input symbol strings as event data.

15 25. A computer readable recording medium for recording a program for allowing a computer to execute, comprising:

a voice recognition processing step of recognizing voice uttered by a user, and of converting the recognized voice into an input symbol string;

20 a conversation pattern processing step of inputting said input symbol string, and of outputting an output symbol string corresponding to said input symbol string based on a conversation pattern described in advance;

a voice synthesis processing step of converting said output symbol string into voice;

25 a voice output step of outputting and uttering the voice obtained in the voice synthesis processing step; and

a conversation characteristic control step of grasping conversation characteristics of said user based on said input symbol string, and of changing said output symbol string in accordance with the grasped conversation characteristics.